=> s zeatin

L1 12380 ZEATIN

=> s micropropagation

L2 24658 MICROPROPAGATION

=> s cryopreservation

L3 30052 CRYOPRESERVATION

=> s l1 and l2 and l3

17 FILES SEARCHED...
L4 2 L1 AND L2 AND L3

=> d l4 all

L4 ANSWER 1 OF 2 AGRICOLA
AN 2000:54513 AGRICOLA
DN IND22061415
TI **Cryopreservation** of white poplar (Populus alba L.) by vitrification of in vitro-grown shoot tips.
AU Lambardi, M.; Fabbri, A.; Caccavale, A.
AV DNAL (QK725.P54)
SO Plant cell reports, Jan 2000. Vol. 19, No. 3. p. 213-218
Publisher: Berlin : Springer-Verlag.
CODEN: PCRPD8; ISSN: 0721-7714
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB Shoot tips from in vitro-grown, cold-hardened stock plants of white poplar
(Populus alba L.) were successfully cryopreserved at -196 degrees C by one-step vitrification. After preculturing at 5 degrees C for 2 days on hormone-free MS medium containing different sucrose concentrations, and loading for 20 min with 2 M glycerol and 0.4 M sucrose, shoot tips were treated with the PVS2 vitrification solution and plunged directly into liquid nitrogen. Best survival rate (90%) was obtained when shoot tips were precultured on 0.09 M sucrose, hormone-free MS medium vitrified by exposure to PVS2 solution for 60 min at 0 degrees C and, following cryo-preservation, rewarmed at 40 degrees C and washed in 1.2 M sucrose solution for 20 min. Regrowth was improved by plating shoot tips on a gelled MS medium containing 1.5 micromolar N6-benzyladenine plus 0.5

micromolar gibberellic acid, while shoot rooting was achieved on MS medium containing 3 micromolar indole-3-butyric acid. Following this procedure, almost 60% rooted shoots were obtained from cryopreserved shoot tips.
CC F600 Plant Physiology and Biochemistry; K001 Forestry Related; F200 Plant Breeding and Genetics; F400 Plant Structure
CT benzyladenine; cell growth; **cryopreservation**; culture media; developmental stages; dosage effects; germplasm; gibberellic acid; iba; methodology; **micropropagation**; plant anatomy; plant morphology; polyethylene glycol; populus alba; rooting capacity; shoot apices; shoot tip culture; sucrose; thidiazuron; viability; vitrification; **zeatin**
ST liquid nitrogen
RN 77-06-5 (GIBBERELLIC ACID)
133-32-4 (INDOLE-3-BUTYRIC ACID)
1214-39-7 (BENZYLADENINE)
1214-39-7 (N6-BENZYLADENINE)
1637-39-4 (ZEATIN)
7727-37-9 (NITROGEN)
25322-68-3 (POLYETHYLENE GLYCOL)
51707-55-2 (THIDIAZURON)
56-81-5Q, 25618-55-7Q (GLYCEROL)
57-50-1Q, 25702-74-3Q (SUCROSE)

=>

=> d l4 1-2

L4 ANSWER 1 OF 2 AGRICOLA
AN 2000:54513 AGRICOLA
DN IND22061415
TI **Cryopreservation** of white poplar (Populus alba L.) by vitrification of in vitro-grown shoot tips.
AU Lambardi, M.; Fabbri, A.; Caccavale, A.
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SO Plant cell reports, Jan 2000. Vol. 19, No. 3. p. 213-218
Publisher: Berlin : Springer-Verlag.
CODEN: PCRPD8; ISSN: 0721-7714
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
AN 1999:199297 CAPLUS
DN 130:234793
TI Plant regeneration from protoplasts isolated from friable embryogenic callus of cassava
AU Sofiari, E.; Raemakers, C. J. J. M.; Bergervoet, J. E. M.; Javobsen, E.; Visser, R. G. F.
CS Graduate School Experimental Plant Sciences, Department Plant Breeding, Wageningen Agricultural University, Wageningen, 6700 AJ, Neth.
SO Plant Cell Rep. (1998), 18(1-2), 159-165
CODEN: PCRPD8; ISSN: 0721-7714
PB Springer-Verlag
DT Journal
LA English
RE.CNT 26
RE
(3) Anthony, P; Plant Cell Reports 1994, V13, P251 CAPLUS
(5) Buiteveld, J; Plant Sci 1994, V100, P203 CAPLUS
(7) Chen, W; Plant Cell Rep 1988, V7, P344 CAPLUS

(10) Horn, M; Plant [redacted]l Rep 1988, V7, P469 CAPLUS
(18) Rhodes, C; Scie[redacted] 1988, V240, P204 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

6/9/2 (Item 2 from file: 10)
DIALOG(R)File 10:AGRICOLA
(c) format only 2001 The Dialog Corporation. All rts. reserv.

3210452 92053936 Holding Library: AGL
**Cryopreservation** of embryonic axes of trifoliate orange (Poncirus trifoliata [L.] RAF.)
Radhamani, J. Chandel, K.P.S.
National Plant **Tissue Culture** Repository, New Delhi, India
Berlin, W. Ger. : Springer International.
Plant cell reports. May 1992. v. 11 (4) p. 204-206. ill.
ISSN: 0721-7714 CODEN: PCRPD8
DNAL CALL NO: QK725.P54
Language: English
Includes references.
Subfile: OTHER FOREIGN;
Document Type: Article
Halved shoot bases of Allium tuberosum Rottl. ex Spreng. proliferated both axillary and adventitious shoots on B5 medium (1968) supplemented with either 6-benzylaminopurine (0.5 mg/l) or 1-naphthalene acetic acid (0.1 mg/l) and 2-**isopentenyladenine** (0.5 mg/l). In vitro shoots proliferated further numerous shoots upon subculture to fresh medium, and these shoots rooted spontaneously. Plantlets were transplanted successfully to soil and retained the diploid condition of the parents.
DESCRIPTORS: poncirus trifoliata - allium tuberosum - **cryopreservation** - endangered species - genetic resources - genetic variation - in vitro culture - seeds - viability - moisture content;
Geographic Location: india
Section Headings: F200 PLANT BREEDING; P000 NATURAL RESOURCES

6/9/3 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs
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0215748 DBA Accession No.: 97-10869
Germplasm conservation of Guazuma crinita, a useful tree in the Peru-Amazon, by the **cryopreservation** of in vitro-cultured multiple bud clusters - petiole culture; bud culture and propagation; germplasm preservation
AUTHOR: Maruyama E; +Kinoshita I; Ishii K; Ohba K; Sakai A
CORPORATE AFFILIATE: Univ.Tsukuba-Inst.Agr.Forest. Forest.Forest-Prod.Res.Inst.Ibaraki Asabucho
CORPORATE SOURCE: Bio-Resources Technology Division, Forestry and Forest Products Research Institute, P.O. Box 16, Tsukuba Norinkenkyu Danchi-Nai, Ibaraki, 305 Japan.
JOURNAL: Plant Cell Tissue Organ Culture (48, 3, 161-65) 1997
ISSN: 0167-6857 CODEN: PTCEDJ
LANGUAGE: English
ABSTRACT: Petiole explants of Guazuma crinita Mart. were cultured on Woody Plant medium (WPM) with 10 uM **zeatin** . Cryoprotectant mix solutions consisted of WPM and: A) 30% glycerol, 15% ethylene glycol and 15% DMSO; B) 25% glycerol, 15% sucrose, 15% ethylene glycol, 13% DMSO and 2% PEG; or C) 35% ethylene glycol, 10% DMSO and 5% PEG. Survival of bud clusters after storage in liquid nitrogen depended on the size of the explant, cryoprotectant mix and duration of cryoprotectant mix treatment. High survival rates (73-85%) were achieved in small cubic segments (1.0-1.5 cu mm) pretreated with mix A or B for 5-90 min. In contrast, large cluster explants (3.0-4.0 cu mm),

and those treat[redacted] with mix C, did not survive. [redacted]e highest survival rate was for e[redacted]lants treated with mix A for 1[redacted]5 min or mix B for 15-60 min. No differences were observed among rates of shoot development from untreated control and surviving cryopreserved explants, nor were there any morphological abnormalities in plants regenerated from cryopreserved bud cluster segments. (25 ref)
DESCRIPTORS: Guazuma crinita germplasm preservation, petiole culture, **cryopreservation**, bud culture, propagation plant forest tree **tissue culture** medium (Vol.16, No.21)
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

6/9/4 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0189559 DBA Accession No.: 96-00330
Olive culture establishment in vitro - and propagation from single-node culture (conference paper)
AUTHOR: Jug-Dujakovic M; Kovacevic I
CORPORATE AFFILIATE: Univ.Split
CORPORATE SOURCE: Institute for Adriatic Crops and Carst, melioration, University of Split, 58000 Split, Croatia.
JOURNAL: Acta Pharm.(Zagreb) (45, 2, Suppl.1, 171-74) 1995
ISSN: 1330-0075 CODEN: 0282K
CONFERENCE PROCEEDINGS: Plant Physiology, 1st Slovenian Symposium, Gozd Martuljek, Slovenia, 29 September-1 October, 1993.
LANGUAGE: English
ABSTRACT: Single-node explants from the current year shoot of 5-yr-old olive (Olea europaea L.) trees were cultured on Initial Medium (IM) or Woody Plant Medium (WPM), both containing 0.5 mg/l **zeatin** and 0.6% agar. Incubation was at 25 deg with a 16 hr photoperiod. After 6-7 wk, the axillary buds developed normal shoots at a frequency of 73.5% on IM medium and 62.8% on WPM medium (for cv. Oblica) and 81.6% and 92.9%, respectively, for cv. Lastovka. Results suggest that the use of a suitable explant may be of significant importance in the propagation of grapevine. In olive, in vitro techniques are useful for the propagation of difficult-to-propagate cvs. by cuttings, genetic improvement, production of disease-free plants and **cryopreservation**. (5 ref)
DESCRIPTORS: olive single-node culture, cv., explant effect on propagation plant tree Olea europaea **tissue culture** medium (Vol.15, No.1)
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

6/9/5 (Item 3 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0142849 DBA Accession No.: 93-00901 PATENT
Tree shoot meristem culture and **cryopreservation** - for subsequent propagation
PATENT ASSIGNEE: Oji-Paper 1992
PATENT NUMBER: JP P4281723 PATENT DATE: 921007 WPI ACCESSION NO.: 92-384682 (9247)
PRIORITY APPLIC. NO.: JP 9167551 APPLIC. DATE: 910308
NATIONAL APPLIC. NO.: JP 9167551 APPLIC. DATE: 910308
LANGUAGE: Japanese
ABSTRACT: In a new method, a tree shoot apical meristem is precultured in a liquid culture medium containing plant growth factors, including naphthaleneacetic acid, 2,4-D or indoleacetic acid, cytokinins, including benzyladenine, kinetin, N-(2-chloro-4-pyridyl)-N'-phenylurea (4PU) or **zeatin**, and cane sucrose, at 20-30 deg for 3-10 days. Dehydration in the presence of an antifreeze agent, e.g. glycerol,

DMSO, sorbitol or sucrose, and gradual reduction in temp. to -30 to -60 deg are carried out, prior to storage in liquid nitrogen. To recover the tissue, the tissue is transferred to a warm bath at 35-70 deg and rapidly fused. The preculture medium is solidified with agar, filter paper is spread on the surface, and aseptic culture is carried out on the filter paper for 10-30 days, to obtain a green shoot meristem culture. Culture is carried out at 20-30 deg at an illumination of 2,000-7,000 lux. (5pp)
DESCRIPTORS: tree shoot meristem culture, **cryopreservation**, pot. propagation preservation plant **tissue culture** medium
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

6/9/6 (Item 4 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0136694 DBA Accession No.: 92-09186
Plant regeneration from callus cultures of Allium trifoliatum subsp. hirsutum and assessment of genetic stability by isozyme polymorphism - leaf culture, callus culture and propagation
AUTHOR: Viterbo A; +Rabinowitch H D; Altman A
CORPORATE SOURCE: Department of Field and Vegetable Crops, The Hebrew University of Jerusalem, Rehovot, Israel.
JOURNAL: Plant Breed. (108, 4, 265-73) 1992
CODEN: PLABED
LANGUAGE: English
ABSTRACT: Plant regeneration from callus cultures of Allium trifoliatum subsp. hirsutum fertile accession F-370 was studied as a means for clonal multiplication and **germplasm storage** of Allium spp. Callus was induced on in vitro-cultured basal leaf explants. Best proliferation was obtained on modified BDS medium supplemented with 0.75 mg/l picloram, 2.0 mg/l benzyladenine (BA), and 900 mg/l casein hydrolyzate. Shoot and root organogenesis were obtained in 3- to 5-mth-old subcultured calli, on BDS or Murashige-Skoog medium supplemented with either 0.03 mg/l picloram or no auxin, 2 mg/l BA or **isopentenyladenine**, and 900 mg/l casein hydrolyzate. Direct bulb formation, without shoot elongation, occurred on BDS medium with 10 mg/l indolebutyric acid. Under these conditions, callus formation and organogenesis were not obtained with A. trifoliatum subsp. hirsutum var. sterile, a male-sterile genotype. Most regenerants were phenotypically normal, but some abnormal shoots were also observed, i.e. shoots with vitrified or extremely broad leaves. (34 ref)
DESCRIPTORS: Allium trifoliatum leaf culture, callus culture, propagation plant cell culture **tissue culture** germplasm preservation

13/9/14 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


07928721 BIOSIS NO.: 000093017119
THE USE OF **ZEATIN** TO INITIATE IN-VITRO CULTURES OF VACCINIUM-SPP AND CULTIVARS
AUTHOR: REED B M; ABDELNOUR-ESQUIVEL A
AUTHOR ADDRESS: NATIONAL CLONAL GERMPLASM REPOSITORY, U.S. DEP. AGRIC./AGRIC. RESEARCH SERV., 33447 PEORIA RD., CORVALLIS, OREG. 97333.
JOURNAL: HORTSCIENCE 26 (10). 1991. 1320-1322. 1991
FULL JOURNAL NAME: Hortscience
CODEN: HJHSA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Explants of mature pot-grown Vaccinium corymbosum L. cultivars were tested for initiation of new **shoots** using two growing conditions and four cytokinin treatments. Initiation tests with 12 genotypes showed significantly higher rates of new **shoot** growth on modified woody plant (MWPM) medium with 4 mg **zeatin**/liter at 25C under low light intensity than on any other treatment. Explants at 25C in light with 10 or 15 mg 2iP/liter initiated at a moderate rate, but significantly lower rates were found for all controls and at 4C in darkness. To determine the utility of **zeatin** for initiation of diverse genotypes, 96 Vaccinium accessions from the National Clonal Germplasm Repository, representing 22 species and 44 cultivars, were screened using 25 C and low light intensity. Initiation rates higher than 60% were achieved for 89 of 96 accessions tested. Chemical name used: N6-[2-**isopentenyl**]**adenine** (2iP), 6-[4-hydroxy-3-methylbut-2-enylamino]purine (**zeatin**).

DESCRIPTORS: VACCINIUM-CORYMBOSUM PLANT BLUEBERRY CRANBERRY LINGONBERRY GROWTH REGULATOR CYTOKININ **TISSUE CULTURE** LIGHT INTENSITY TEMPERATURE **MICROPROPAGATION**
CONCEPT CODES:
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
32500 Tissue Culture, Apparatus, Methods and Media
51503 Plant Physiology, Biochemistry and Biophysics-Temperature
51510 Plant Physiology, Biochemistry and Biophysics-Growth, Differentiation
51512 Plant Physiology, Biochemistry and Biophysics-Reproduction
51514 Plant Physiology, Biochemistry and Biophysics-Growth Substances
51516 Plant Physiology, Biochemistry and Biophysics-Light and Radiation Effects
53006 Horticulture-Small Fruits
10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
10604 External Effects-Light and Darkness
10614 External Effects-Temperature as a Primary Variable (1971- )
BIOSYSTEMATIC CODES:
26035 Ericaceae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Plants
Vascular Plants
Spermatophytes
Angiosperms
Dicots

13/9/20 (Item 3 from file: 10)
DIALOG(R)File 10:AGRICOLA
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3665751 20905013 Holding Library: AGL
An efficient method for adventitious **shoot** regeneration from stem-segment explants of gypsophila
Ahroni, A. Zuker, A.; Rozen, Y.; Shejtman, H.; Vainstein, A.
Dordrecht, The Netherlands : Kluwer Academic Publishers.
Plant cell, tissue and organ culture. 1997. v. 49 (2) p. 101-106.
ISSN: 0167-6857 CODEN: PTCEDJ
DNAL CALL NO: QK725.P53
Language: English
Includes references
Place of Publication: Netherlands
Subfile: IND; OTHER FOREIGN;
Document Type: Article
An efficient adventitious **shoot** regeneration procedure was developed for Gypsophila paniculata L. Using cultivar Arbel, **shoot** regeneration from the three upper internodes of the stem was monitored on MS media supplemented with different cytokinins (thidiazuron, benzyladenine, kinetin or **zeatin** ) and an auxin (naphthaleneacetic acid). Thidiazuron was found to be the most efficient cytokinin, with up to 100% of the explants forming **shoots**, at an average of up to 19 **shoots** per explant being regenerated. The highest percentage of **shoot** formation was observed in the stem explants originating from the first internode, with all cytokinins tested. The adventitious origin of **shoots** regenerated from stem explants was confirmed by scanning electron microscopy. The regeneration procedure was found to be applicable to five other gypsophila cultivars (Perfecta, Golan, Gilboa, Flamingo and Tavor). Regenerating plants were successfully transferred to soil, and did not differ in flower color, size or shape from standard vegetatively propagated plants derived from cuttings.
DESCRIPTORS: gypsophila paniculata - **micropropagation** - **tissue culture** - stems - explants - methodology - culture media - benzyladenine - **zeatin** - kinetin - thidiazuron - dosage effects - **shoots** - regenerative ability - rooting - developmental stages - plant morphology - ultrastructure;
Section Headings: F110 PLANT PRODUCTION-HORTICULTURAL CROPS; F600 PLANT PHYSIOLOGY AND BIOCHEMISTRY; F400 PLANT STRUCTURE AND CYTOLOGY

13/9/22 (Item 5 from file: 10)
DIALOG(R)File 10:AGRICOLA
(c) format only 2001 The Dialog Corporation. All rts. reserv.

3634131 20613141 Holding Library: AGL
Direct **shoot** regeneration from Vaccinium pahalae (Ohelo) and V. myrtillus (Bilberry) leaf explants
Shibli, R.A. Smith, M.A.L.
University of Illinois, Urbana, IL.
Alexandria, Va. : The American Society for Horticultural Science.
HortScience : a publication of the American Society for Horticultural Science. Dec 1996. v. 31 (7) p. 1225-1228.
ISSN: 0018-5345 CODEN: HJHSAR
DNAL CALL NO: SB1.H6
Language: English
Includes references
Place of Publication: Virginia
Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);
Document Type: Article
Ohelo (V. pahalae Skottsb.) and bilberry (V. myrtillus L.) **shoots** were regenerated via direct organogenesis from whole leaves and leaf sections and also from hypocotyl explants of bilberry. Explants

preincubated for 1 [redacted] 2 weeks in darkness yiel[redacted] approximately 75% regeneration freque[redacted]es and the highest numb[redacted] of regenerating **shoots**/explant on TDZ-supplemented media (0.9 to 2.7 micromole). When 2iP or **zeatin** were substituted as the cytokinin source, frequencies of regeneration and **shoot** productivity were significantly lower. Explants held under constant illumination (no dark pretreatment) had significantly lower regeneration frequencies in all tested cytokinin-supplemented media. 2,4-D stimulated callus formation, but did not support regeneration from vegetative explants. Cells from callus and suspension cultures did not exhibit regeneration in any of the media that supported organogenesis from leaves. Regenerants were successfully micropropagated, although callus formation caused by **zeatin** and high 2iP levels interfered with **shoot** proliferation. **Zeatin** induced hyperhydricity in **shoots** from both species, but more severely in ohelo. Ex vitro rooting after treatment with 4.9 micromolar IBA or 5.4 micromolar NAA was 95% and 60% successful for bilberry and ohelo, respectively, and plants were readily acclimatized after an interval in a fog chamber. Bilberry microshoots also rooted in vitro in the absence of growth regulator treatment.

DESCRIPTORS: vaccinium myrtillus - regenerative ability - organogenesis - **tissue culture** - culture media - callus - initiation - **zeatin** - 2,4-d - thidiazuron - illumination - light relations - dark - **shoots** - growth - dry matter accumulation - rooting - iba - naa - genotypes - **micropropagation** - acclimatization - **isopentenyladenine**;

Section Headings: F600 PLANT PHYSIOLOGY AND BIOCHEMISTRY; F110 PLANT PRODUCTION-HORTICULTURAL CROPS

13/9/40 (Item 23 from file: 10)
DIALOG(R)File 10:AGRICOLA


3395343 20419680 Holding Library: AGL

Effect of different cytokinins on axillary **shoot** proliferation and elongation of several genotypes of Sequoia sempervirens

Sul, I.W. Korban, S.S.

Columbia, MD : Tissue Culture Association, c1991-

In vitro cellular & developmental biology. Plant : journal of the Tissue Culture Association. July 1994. v. 30P (3) p. 131-135.

ISSN: 1054-5476 CODEN: IVCPEO

DNAL CALL NO: QK725.I43

Language: English

Includes references

Place of Publication: Maryland

Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

DESCRIPTORS: sequoia sempervirens - **micropropagation** - stems - explants - **shoots** - organogenesis - cytokinins - genotypes - **tissue culture** - **zeatin**;

Section Headings: F600 PLANT PHYSIOLOGY AND BIOCHEMISTRY; K120 FORESTRY PRODUCTION-ARTIFICIAL REGENERATION

13/9/45 (Item 28 from file: 10)
DIALOG(R)File 10:AGRICOLA


3237098 92071186 Holding Library: AGL

In vitro propagation of Allium tuberosum Rottl. ex. Spreng. by **shoot** proliferation

Pandey, R. Chandel, K.P.S.; Rama Rao, S.

National Plant **Tissue Culture** Repository, New Delhi, India

Berlin, W. Ger. : Springer International.

Plant cell reports. 1992. v. 11 (7) (12) p. 375-378.

ISSN: 0721-7714 CODEN: PCRPD8
DNAL CALL NO: QK725.[illegible]4
Language: English
Includes references.
Subfile: OTHER FOREIGN;
Document Type: Article

Halved **shoot** bases of Allium tuberosum Rottl. ex Spreng. proliferated both axillary and adventitious **shoots** on B5 medium (1968) supplemented with either 6-benzylaminopurine (0.5 mg/l) or 1-naphthalene acetic acid (0.1 mg/l) and 2-**isopentenyladenine** (0.5 mg/l). In vitro **shoots** proliferated further numerous **shoots** upon subculture to fresh medium, and these **shoots** rooted spontaneously. Plantlets were transplanted successfully to soil and retained the diploid condition of the parents.

DESCRIPTORS: allium tuberosum - **shoots** - in vitro culture - culture media - transplanting - germplasm - genetic resources - **micropropagation** - clones;

Section Headings: F600 PLANT PHYSIOLOGY AND BIOCHEMISTRY; F110 PLANT PRODUCTION-HORTICULTURAL CROPS; F200 PLANT BREEDING

13/9/47 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0212065 DBA Accession No.: 97-07186
In vitro **shoot** proliferation of 5-leaf aralia explants from field grown plants and forced dormant stems - Acanthopanax sieboldianus **shoot** node culture and propagation
AUTHOR: Yang G; Read P E
CORPORATE AFFILIATE: Univ.North-Carolina-State Univ.Nebraska
CORPORATE SOURCE: Department of Natural Resources and Environmental Design, North Carolina A & T State University, Greensboro, NC 27411, USA.
JOURNAL: Plant Cell Tissue Organ Culture (47, 3, 289-91) 1997
ISSN: 0167-6857 CODEN: PTCEDJ
LANGUAGE: English
ABSTRACT: Research was conducted with the following objectives:(1) to study effects of benzyladenine (BA), thidiazuron (TDZ), forchlorfenuron (CPPU), **isopentenyladenine** (2iP), kinetin and **zeatin** (Z) in woody plant medium on the performance of softwood **shoot** nodal explants produced by field grown 5-leaf aralia Acanthopanax sieboldianus plants; and (2) to investigate influences of BA or TDZ in the forcing solution on subsequent in vitro **shoot** initiation of nodal explants taken from forced softwood growth. The forced softwood growth for use as explants was primed by forcing dormant stems in solution containing 200 mg/l 8-hydroxyquinoline citrate (8-HQC), 2% sucrose, and 44.4, 222 or 444 uM BA or 45.4, 227 or 454 uM TDZ. BA and TDZ enhanced the subsequent in vitro axillary **shoot** initiation of nodal explants taken from forced stems and increased **shoots** produced per explant from 1.65 to 3.3. The forcing solution technique reduced the time needed from culture initiation to potted plants by half (12 to 14 versus 25 to 27 wk), expediting the **micropropagation** of aralia. (8 ref)
DESCRIPTORS: Acanthopanax sieboldianus 5-leaf **shoot** node culture, field grown plant, forced dormant stem comparison, propagation aralia tree **tissue culture** medium
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

13/9/55 (Item 9 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0180368 DBA Accession No.: 95-08388
A **micropropagation** system for hazelnuts (Corylus species) - hazelnut

propagation from [redacted]ot tip culture and node cultur[redacted]
AUTHOR: Yu X; +Reed [redacted]
CORPORATE AFFILIATE: Univ.Oregon-State USDA-ARS
CORPORATE SOURCE: U.S. Department of Agriculture, Agricultural Research Service, National Clonal Germplasm Repository, 33447 Peoria Road, Corvallis, OR 97333-2521, USA.
JOURNAL: Hortscience (30, 1, 120-23) 1995
ISSN: 0018-5345 CODEN: HJHSAR
LANGUAGE: English
ABSTRACT: **Shoot** tip and node explants from hazelnut (Corylus sp.) cultivars Barcelona, Gasaway, Willamette, Dundee and Newberg were cultured on NCGR-COR medium, a modified DKW medium (altered by substituting 30 g/l glucose for sucrose, 200 mg/l Sequesterene 138 FE for FeEDTA and 5 g/l agar for Gelrite. For culture establishment, 22.2 uM benzyladenine (BA) and 0.04 uM indoleacetic acid were added and incubated at 25 deg with a 16 hr photoperiod. **Shoots** from established Willamette, Dundee and Newberg cultures were cut into nodal segments and **shoot** tips and grown in Magenta GA7 boxes containing 40 ml NCGR-COR medium supplemented with 6.7 uM BA and 0.04 uM indolebutyric acid (IBA). Nodal explants were used to determine the optimum plant growth factor combinations (6.7 uM BA, 6.7 uM BA plus 0.04 uM IBA, 22.2 uM BA, and 8.9 uM plus 4.9 uM **isopentenyladenine**) for **shoot** multiplication. **Shoots** formed on multiplication medium were transferred to Magenta GA7 boxes containing NCGR-COR medium at half of the normal concentration of mineral salts with 4.9 uM IBA for 4 weeks. Rooted and non-rooted **shoots** were transplanted to greenhouse conditions. (20 ref)
DESCRIPTORS: hazelnut **shoot** tip culture, node culture, propagation Corylus plant tree **tissue culture** medium (Vol.14, No.14)
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

13/9/65 (Item 19 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0125934 DBA Accession No.: 91-13576
A two-stage **micropropagation** system for cranberries - cranberry propagation via **shoot** culture proliferation and rooting
AUTHOR: Marcotrigiano M; McGlew S P
CORPORATE SOURCE: Department of Plant and Soil Sciences, University of Massachusetts, Amherst, MA 01003, USA.
JOURNAL: J.Am.Soc.Hortic.Sci. (116, 5, 911-16) 1991
CODEN: JOSHB5
LANGUAGE: English
ABSTRACT: A 2-stage propagation system was devised for cranberry (Vaccinium macrocarpon Ait.). **Shoot** tips from greenhouse-grown cv. Beckwith, Bergman, Franklin and Stevens were placed on a medium containing Anderson's salts, Murashige and Skoog (MS) minor salts and organics, plus various concentrations of **isopentenyladenine** (2iP), indolebutyric acid (IBA) and gibberellin (GA). Optimal multiplication and **shoot** quality were observed when nodal explants taken from greenhouse-grown or micropropagated plants were placed on medium containing 150 uM 2iP, 1.0 uM IBA and no GA. Histological examination revealed that the initial response of nodes to culture was axillary bud proliferation, but adventitious **shoot** formation occurred after 4-6 wk. Cultures that contained only axillary **shoots** were not evident unless low levels of 2iP were used, at which point only axillary buds present on the explants were released. Proliferated **shoots** were rooted ex vitro without auxin treatment. Optimal rooting occurred under high light conditions. Plants were transplanted to the field for comparison to conventionally propagated plants. (23 ref)
DESCRIPTORS: cranberry propagation, **shoot** culture, rooting, culture medium fruit Vaccinium macrocarpon plant **tissue culture**

SECTION: Agriculture-[redacted]tivation in-vitro (E4)

13/9/73 (Item 27 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0110386 DBA Accession No.: 90-13077 PATENT
**Micropropagation** of Picea abies - Norway spruce propagation
PATENT ASSIGNEE: Inst.Plant.Physiol. 1989
PATENT NUMBER: SU 1513032 PATENT DATE: 891007 WPI ACCESSION NO.: 90-236892 (9031)
PRIORITY APPLIC. NO.: SU 4415477 APPLIC. DATE: 880425
NATIONAL APPLIC. NO.: SU 4415477 APPLIC. DATE: 880425
LANGUAGE: Russian
ABSTRACT: The efficiency of clonal **micropropagation** of Norway spruce (Picea abies (alpha) Karst) is increased as follows: cells are cultured for adventitious bud production in culture medium containing **zeatin** and sucrose at 1.0-1.2 mg/l and 0.5-0.7%, respectively, with the concentration increased to 1.0-1.2% during subsequent stages. **Shoots** are cultured in the presence of 0.5-1.0% activated carbon, and rooting medium contains additional 3-3.5 mg/l indolebutyric acid. The plants show increased yield. (5pp)
DESCRIPTORS: Norway spruce adventitious bud culture, **shoot** culture, root culture, propagation, culture medium plant conifer Picea abies **tissue culture** forest tree
SECTION: Agriculture-Cultivation in-vitro (E4)

13/9/83 (Item 37 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0079413 DBA Accession No.: 88-10262
Adventitious **shoot** production from leaves of blueberry cultured in vitro - 2-**isopentenyladenine** concentration effect on plant propagation
AUTHOR: Dweikat I M; Lyrene P M
CORPORATE SOURCE: Fruit Crops Department, University of Florida, Gainesville, FL 32611, USA.
JOURNAL: Hortscience (23, 3, Sect.1, 629) 1988
CODEN: HJHSAR
LANGUAGE: English
ABSTRACT: The effect of 2-**isopentenyladenine** (2-ip) concentration was studied on survival and adventitious **shoot** production of detached blueberry (Vaccinium corymbosum X Vaccinium elliottii) **shoot** cultures, grown on blueberry **micropropagation** medium containing 24.6 uM 2ip at 22 deg under a 16 hr photoperiod for 1 yr. Leaves were transferred horizontally with their abaxial surfaces in contact with modified Knops medium supplemented with 0, 24.6, 49.2, 98.4 or 196.7 uM 2ip. After 3 wk **shoots** formed on both leaf surfaces on media with low 2ip concentration (24.6 and 49.2 uM) and 2 wk later on media of higher 2ip concentration. After 12 wk the number of surviving leaves, **shoots** per leaf and **shoot** lengths were recorded. Leaf survival was correlated with 2ip concentration with no or little survival at 0 and 196.7 uM 2ip, respectively. As 2ip concentration increased from 49.2-196.7 uM, the mean number of **shoots** 0.5 cm or longer decreased from 43.2-3.8. The 24.6 and 49.2 uM 2ip levels produced similar numbers of **shoots** . As 2ip concentration increased from 24.6 to 196.7 uM the **shoot** length decreased. Plants were rooted in Sphagnum peat in 6 wk. (7 ref)
DESCRIPTORS: blueberry leaf culture, propagation, **isopentenyladenine** effect on survival, adventitious **shoot** formation Vaccinium corymbosum Vaccinium elliottii **tissue culture** plant growth factor

SECTION: Agriculture-Cultivation in-vitro (E4)

13/9/88 (Item 42 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0050724 DBA Accession No.: 86-08572
A **micropropagation** system for carob (Ceratonia siliqua L.) - **shoot** culture; culture medium
AUTHOR: Sebastian K T; McComb J A
CORPORATE SOURCE: Forest Science Laboratory, P.O. Box 898, Rhinelander, WI 54501, USA.
JOURNAL: Sci.Hortic.(Amsterdam) (28, 1-2, 127-31) 1986
CODEN: SHRTAH
LANGUAGE: English
ABSTRACT: **Shoots** from seedlings and mature trees of carob (Ceratonia siliqua L.) were cultured in basal culture media of Gamborg B-5 and Murashige and Skoog (MS); the latter was superior in **shoot** development. Experiments were thus performed with this medium supplemented with agar and 2% sucrose, with **zeatin**, gibberellin, indolebutyric acid (IBA) and ancymidol. Incubation of cultures were effected at 26 deg with 16 hr of light/day. For root induction, half-strength MS major and minor minerals with 2% sucrose and 0.8% agar was used, supplemented with 10 uM IBA. **Shoots** were cultured on the medium in the dark for 1 wk, then exposed to 16 hr light/day. Rooted plantlets were transferred to peat moss:vermiculite:perlite before transplanting to normal glasshouse conditions. 5 uM **Zeatin** was suitable for **shoot** multiplication, and gibberellin (2.5 uM) in this medium inhibited subsequent rooting. This effect was partially overcome with passage in a medium containing 5 uM **zeatin** alone, and was completely reversed if 5 uM ancymidol was also added. (13 ref)
DESCRIPTORS: carob **shoot** culture, propagation, culture medium effect
plant Ceratonia siliqua **tissue culture**
SECTION: Agriculture-Cultivation in-vitro (E4)

13/9/96 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


104163638 CA: 104(19)163638u JOURNAL
In vitro propagation of Ericaceae: a comparison of the activity of the cytokinins N6-benzyladenine and N6-isopentenyladenine in shoot proliferation
AUTHOR(S): Norton, Margaret E.; Norton, Colin R.
LOCATION: Dep. Plant Biol. Ecol., Univ. St. Andrews, St. Andrews, UK, KY16 9AL
JOURNAL: Sci. Hortic. (Amsterdam) DATE: 1985 VOLUME: 27 NUMBER: 3-4
PAGES: 335-40 CODEN: SHRTAH ISSN: 0304-4238 LANGUAGE: English
SECTION:
CA105003 Agrochemical Bioregulators
CA111XXX Plant Biochemistry
IDENTIFIERS: Ericaceae micropropagation benzyladenine isopentenyladenine, cytokinin Ericaceae micropropagation
DESCRIPTORS:
Arctostaphylos... Erica carnea... Ericaceae... Gaultheria hispidula... Kalmia... Rhododendron... Vaccinium vitis-idaea...
benzyladenine and isopentenyladenine effect shoot proliferation in Plant tissue culture...
of Ericaeae explants, shoot proliferation in, benzyladenine and isopentenyl adenine effect on
Plant hormones and regulators,cytokinins...
shoot proliferation in Ericaceae response to
CAS REGISTRY NUMBERS:

1214-39-7 2365-40-4 [redacted]ot proliferation in Ericaceae [redacted]sponse to

16/9/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


09100745 BIOSIS NO.: 199497109115
**Cryopreservation** of potato (Solanum tuberosum) **shoot**-tips.
AUTHOR: Lu Shaoli; Steponkus Peter L
AUTHOR ADDRESS: Dep. Soil Crop and Atmospheric Sci., Cornell Univ., Ithaca, NY 14853**USA
JOURNAL: Cryobiology 30 (6):p652-653 1993
CONFERENCE/MEETING: Thirtieth Annual Meeting of the Society for Cryobiology Atlanta, Georgia, USA July 19-23, 1993
ISSN: 0011-2240
RECORD TYPE: Citation
LANGUAGE: English
DESCRIPTORS:
MAJOR CONCEPTS: Methods and Techniques; Physiology
BIOSYSTEMATIC NAMES: Solanaceae--Dicotyledones, Angiospermae, Spermatophyta, Plantae
ORGANISMS: Solanum tuberosum (Solanaceae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): angiosperms; dicots; plants; spermatophytes; vascular plants
MISCELLANEOUS TERMS: MEETING ABSTRACT; **TISSUE CULTURE** METHOD
CONCEPT CODES:
23004 Temperature: Its Measurement, Effects and Regulation-Cryobiology
32500 Tissue Culture, Apparatus, Methods and Media
51503 Plant Physiology, Biochemistry and Biophysics-Temperature
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and Methods
00520 General Biology-Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals
10616 External Effects-Temperature as a Primary Variable-Cold (1971- )
BIOSYSTEMATIC CODES:
26775 Solanaceae

16/9/15 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


08777316 BIOSIS NO.: 199395066667
**Cryopreservation** of alginate-coated in vitro-grown **shoot** tips of apple, pear and mulberry.
AUTHOR: Niino Takao(a); Sakai Akira
AUTHOR ADDRESS: (a)National Inst. Agrobiological Resources, Shinjo, Yamagata 996**Japan
JOURNAL: Plant Science (Limerick) 87 (2):p199-206 1992
ISSN: 0168-9452
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Alginate-coated **shoot** tips from in vitro-grown apple (Malus domestica Borkh cv. Fuji) were successfully cryopreserved following dehydration. **Shoot** tips cold-hardened at 5 degree C for 3 weeks, were progressively precultured on MS agar media with increasing sucrose (0.1, 0.4 and 0.7 M) daily at 5 degree C. The precultured **shoot** tips trapped into alginate-coated beds containing 0.5 M sucrose were

treated in a medium supplemented with 1.0 M sucrose for 15 h at 5 degree C. Beads containing **shoot** tip were then dehydrated to about 33% water content (fresh weight basis) on sterile dry silica gel at 25 degree C before being immersed to liquid nitrogen (LN). The average rate of **shoot** formation after warming was about 80%. This method was successfully applied to three apple, one mulberry, (Morus bombysis ) and three pear species of cultivars (Pyrus communis, P. pyritolia). This encapsulation-dehydration method also permitted the **shoot** tips to be stored at -135 degree C for 5 months with little or no decrease in the rate of **shoot** formation. This modified method appears to be a promising technique for cryopreserving **shoot** tips from in vitro-grown plantlets of deciduous trees.

DESCRIPTORS:
MAJOR CONCEPTS: Development; Horticulture (Agriculture); Methods and Techniques; Physiology
BIOSYSTEMATIC NAMES: Moraceae--Dicotyledones, Angiospermae, Spermatophyta, Plantae; Rosaceae--Dicotyledones, Angiospermae, Spermatophyta, Plantae
ORGANISMS: Malus domestica (Rosaceae); Morus bombysis (Moraceae); Pyrus communis (Rosaceae); Pyrus pyrifolia (Rosaceae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): angiosperms; dicots; plants; spermatophytes; vascular plants
MISCELLANEOUS TERMS: METHOD; **TISSUE CULTURE**
CONCEPT CODES:
10616 External Effects-Temperature as a Primary Variable-Cold (1971- )
32500 Tissue Culture, Apparatus, Methods and Media
51503 Plant Physiology, Biochemistry and Biophysics-Temperature
51510 Plant Physiology, Biochemistry and Biophysics-Growth, Differentiation
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and Methods
53002 Horticulture-Temperate Zone Fruits and Nuts
23004 Temperature: Its Measurement, Effects and Regulation-Cryobiology
BIOSYSTEMATIC CODES:
26395 Moraceae
26675 Rosaceae

16/9/24 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0215748 DBA Accession No.: 97-10869
Germplasm conservation of Guazuma crinita, a useful tree in the Peru-Amazon, by the **cryopreservation** of in vitro-cultured multiple bud clusters - petiole culture; bud culture and propagation; germplasm preservation
AUTHOR: Maruyama E; +Kinoshita I; Ishii K; Ohba K; Sakai A
CORPORATE AFFILIATE: Univ.Tsukuba-Inst.Agr.Forest. Forest.Forest-Prod.Res.Inst.Ibaraki Asabucho
CORPORATE SOURCE: Bio-Resources Technology Division, Forestry and Forest Products Research Institute, P.O. Box 16, Tsukuba Norinkenkyu Danchi-Nai, Ibaraki, 305 Japan.
JOURNAL: Plant Cell Tissue Organ Culture (48, 3, 161-65) 1997
ISSN: 0167-6857 CODEN: PTCEDJ
LANGUAGE: English
ABSTRACT: Petiole explants of Guazuma crinita Mart. were cultured on Woody Plant medium (WPM) with 10 uM zeatin. Cryoprotectant mix solutions consisted of WPM and: A) 30% glycerol, 15% ethylene glycol and 15% DMSO; B) 25% glycerol, 15% sucrose, 15% ethylene glycol, 13% DMSO and 2% PEG; or C) 35% ethylene glycol, 10% DMSO and 5% PEG. Survival of bud clusters after storage in liquid nitrogen depended on the size of the explant, cryoprotectant mix and duration of cryoprotectant mix treatment. High survival rates (73-85%) were achieved in small cubic

segments (1.0-1.[redacted] cu mm) pretreated with mix A [redacted] B for 5-90 min. In contrast, large [redacted]luster explants (3.0-4.0 cu m[redacted], and those treated with mix C, did not survive. The highest survival rate was for explants treated with mix A for 15-45 min or mix B for 15-60 min. No differences were observed among rates of **shoot** development from untreated control and surviving cryopreserved explants, nor were there any morphological abnormalities in plants regenerated from cryopreserved bud cluster segments. (25 ref)
DESCRIPTORS: Guazuma crinita germplasm preservation, petiole culture, **cryopreservation**, bud culture, propagation plant forest tree **tissue culture** medium (Vol.16, No.21)
SECTION: AGRICULTURE-In-Vitro Propagation (E4)

16/9/43 (Item 21 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0139437 DBA Accession No.: 92-11929
**Cryopreservation** of in vitro-cultured multiple bud clusters of asparagus (Asparagus officinalis L. cv Hiroshimagreen (2n = 30) by the techniques of vitrification - multiple bud culture **cryopreservation** by vitrification for potential germplasm preservation
AUTHOR: Kohmura H; Sakai A; Chokyu S; Yakuwa T
CORPORATE SOURCE: Institute of Biotechnology, Hiroshima Prefectural Agricultural Research Center, Hara, Hachihonmatsu, Higashi-hiroshima 739-01, Japan.
JOURNAL: Plant Cell Rep. (11, 9, 433-37) 1992
CODEN: PCRPD8
LANGUAGE: English
ABSTRACT: A culture producing multiple bud clusters was induced from asparagus (Asparagus officinalis L. cv. Hiroshimagreen (2n = 30)) meristem culture. Explants (2 cu mm) of the bud clusters were cryopreserved by 3 different methods. Only vitrification produced very high levels of **shoot** formation after cooling to -196 deg. Samples were treated with vitrification solution PVS2 (30% glycerol, 15% ethylene glycol, and 15% DMSO in Murashige and Skoog (MS) medium) at 25 deg for 45 min or at 0 deg for 120 min prior to direct immersion into liquid nitrogen. After rapid warming, the explants were expelled into MS medium containing 1.2 M sucrose for 10 min and then transferred to **shoot** induction medium (MS plus 0.02 mg/l benzyladenine, 3% sucrose, 0.8% agar, pH 5.8) at 25 deg under a 16 hr photoperiod. The average rate of **shoot** formation of vitrified explants was about 90% without preculture and/or cold-acclimation treatment. Explants grew within 3 days, producing 3 **shoots** per explant. Root induction occurred on half-strength MS with 0.5 mg/l indolebutyric acid, 3% sucrose and 0.8% agar. Asparagus germplasm preservation may be effected. (23 ref)
DESCRIPTORS: asparagus multiple bud culture **cryopreservation**, vitrification, germplasm preservation Asparagus officinalis **tissue culture** plant propagation
SECTION: Agriculture-Cultivation in-vitro (E4)

16/9/50 (Item 28 from file: 357)
DIALOG(R)File 357:Derwent Biotechnology Abs


0132049 DBA Accession No.: 92-04541
**Cryopreservation** of in vitro-grown **shoot** tips of apple and pear by vitrification - germplasm preservation
AUTHOR: Niino T; Sakai A; Yakuwa H; Nojiri K
CORPORATE SOURCE: Laboratory of Plant and Tissue Preservation, Department of Genetic Resources II, National Institute of Agrobiological

Resources. 6000-1 Tohkamachi, Shinjo, Yamagata, 9 Japan.
JOURNAL: Plant Cell T ue Organ Culture (28, 3, 261- 1992
CODEN: PTCEDJ
LANGUAGE: English
ABSTRACT: A **cryopreservation** method was developed for **tissue-cultured** apple (Malus domestica Borkh cv. Fuji, cv. Golden Delicious, hybrid 423-1 (Fuji x Mohe-7), rootstocks M.9 and M. 26 (Malus paradisiaca Schneid.) and Malus prunifolia Borkh) and pear (Pyrus pyrifolia (Burm.) Nakai Hokkaiwase, Yoshino and Senryo, Pyrus communis L. Beurre d'Amanlis, Beurre Jean Van Geert, Doyenne du Comice, Early Seckel and Fondante Thirriot). **Shoot** tips from cold-hardened (5 deg, 3 wk, 8 hr photoperiod) plantlets were precultured at 5 deg for 1 day on Murashige-Skoog (MS) medium + 0.7 M sucrose under an 8 hr photoperiod. **Shoot** tips were then transferred to vitrification solution PVS2 (30% glycerol, 15% ethylene glycol, 15% dimethyl sulfoxide in MS medium + 0.4 M sucrose) at 25 deg. After dehydration at 25 deg for 80 min, **shoot** tips were plunged into liquid nitrogen. After rapid warming, **shoot** tips were expelled into MS + 1.2 M sucrose and then plated on MS. Direct **shoot** elongation occurred in about 3 wk. The average rate of **shoot** formation was 80%. Almost all **shoots** rooted on modified MS + 1 mg/l naphthaleneacetic acid and were transferred to pots. (16 ref)
DESCRIPTORS: apple, pear **shoot** tip culture, **cryopreservation**, vitrification, appl. germplasm preservation plant fruit tree **tissue culture** Malus domestica Malus paradisiaca Malus prunifolia Pyrus pyrifolia Pyrus communis
SECTION: Agriculture-Cultivation in-vitro (E4)
? t s20/9/5,27,31-33,48

20/9/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


08252871 BIOSIS NO.: 000094044219
TESTING OF DIFFERENT ANTIBIOTICS AGAINST GRAM-POSITIVE AND GRAM-NEGATIVE BACTERIA ISOLATED FROM PLANT **TISSUE CULTURE**
AUTHOR: KNEIFEL W; LEONHARDT W
AUTHOR ADDRESS: DEP. DAIRY RESEARCH BACTERIOLOGY, AGRICULTURAL UNIVERSITY, GREGOR MENDEL-STR. 33, A-1180 VIENNA, AUSTRIA.
JOURNAL: PLANT CELL TISSUE ORGAN CULT 29 (2). 1992. 139-144. 1992
FULL JOURNAL NAME: Plant Cell Tissue and Organ Culture
CODEN: PTCED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Different Gram-positive and Gram-negative bacteria (Staphylococcus xylosus, S. aureus, S. cohnii, Bacillus sp., **Corynebacterium** sp., Pseudomonas vesicularis) were isolated from homogenized shoot tips of Drosera rotundifolia, Spathphyllum sp., Syngonium cv. White butterfly, Nephrolepis exaltata cv. Teddy Junior. Growth inhibition of selected bacterial strains was examined using 28 different single antibiotics and 7 antibiotic mixtures. It was found that with the two mixtures Imipenem/Amphicillin and Imipenem/Penicillin G at concentrations of 5 mg l-1 each, bacterial growth inhibition was most effective. Because of the lack of toxic effects on in vitro plants of 7 species it was proposed that these antibiotic mixtures can be applied advantageously to inhibit bacterial growth in **tissue culture**.

DESCRIPTORS: STAPHYLOCOCCUS-XYLOSUS STAPHYLOCOCCUS-AUREUS-AUREUS STAPHYLOCOCCUS-COHNII BACILLUS-SP **CORYNEBACTERIUM**-SP PSEUDOMONAS-VESICULARIS DROSERA-ROTUNDIFOLIA SPATHIPHYLLUM-SP SYNGONIUM NEPHROLEPIS-EXALTATA METHOD

CONCEPT CODES:
32500 Tissue Cult[illegible], Apparatus, Methods and Media
38504 Chemotherapy-Antibacterial Agents
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and Methods
10060 Biochemical Studies-General
22002 Pharmacology-General
31000 Physiology and Biochemistry of Bacteria
BIOSYSTEMATIC CODES:
06508 Pseudomonadaceae (1992- )
07702 Micrococcaceae (1992- )
07810 Endospore-forming Gram-Positives (1992- )
08890 Irregular Nonsporing Gram-Positive Rods (1992- )
23100 Filices
25230 Araceae
25990 Droseraceae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Microorganisms
Bacteria
Eubacteria
Plants
Vascular Plants
Pteridophytes
Spermatophytes
Angiosperms
Monocots
Dicots

20/9/27 (Item 1 from file: 10)
DIALOG(R)File 10:AGRICOLA


3432541 20449398 Holding Library: AGL
Characterization and identification of bacteria isolated from micropropagated mint plants
Buckley, P.M. DeWilde, T.N.; Reed, B.M.
USDA, ARS, National Clonal Germplasm Repository, Corvallis, OR.
Columbia, MD : Tissue Culture Association, c1991-
In vitro cellular & developmental biology. Plant : journal of the Tissue Culture Association. Jan 1995. v. 31 (1) p. 58-64.
ISSN: 1054-5476 CODEN: IVCPEO
DNAL CALL NO: QK725.I43
Language: English
Includes references
Place of Publication: Maryland
Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76); AR-PWA;
Document Type: Article
DESCRIPTORS: mentha spicata - mentha - micropropagation - **tissue culture** - microbial contamination - endophytes - agrobacterium radiobacter - xanthomonas - pseudomonas fluorescens - micrococcus - **corynebacterium** - curtobacterium;
Section Headings: F140 PLANT PRODUCTION-MISCELLANEOUS CROPS; F832 PLANT DISEASES-BACTERIAL

20/9/31 (Item 5 from file: 10)
DIALOG(R)File 10:AGRICOLA


2945554 89058678 Holding Library: AGL
Microbial contamination of in vitro cultures of apple rootstocks M26 and M9
Hennerty, M.J. Upton, M.E.; James, D.J.; Harris, D.P.; Eaton, R.A.
University College, Dublin, Ireland

inoculation; plants [redacted] growth;
Section Headings: F[redacted] PLANT DISEASES-BACTERIAL [redacted]

20/9/48 (Item 8 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)


86052695 CA: 86(9)52695a JOURNAL
Cytokinins in Corynebacterium fascians cultures. Isolation and identification of
6-(4-hydroxy-3-methyl-cis-2-butenylamino)-2-methylthiopurine
AUTHOR(S): Armstrong, Donald J.; Scarbrough, Emanuel; Skoog, Folke; Cole, Douglas L.; Leonard, Nelson J.
LOCATION: Inst. Plant Dev., Univ. Wisconsin, Madison, Wis.
JOURNAL: Plant Physiol. DATE: 1976 VOLUME: 58 NUMBER: 6 PAGES: 749-52
CODEN: PLPHAY LANGUAGE: English
SECTION:
CA011001 Plant Biochemistry
CA010XXX Microbial Biochemistry
IDENTIFIERS: Corynebacterium cytokinin culture, purine deriv cytokinin Corynebacterium
DESCRIPTORS:
Corynebacterium fascians...
cytokinins of, in tissue culture
Plant tissue culture...
of Corynebacterium fascians, cytokinins in
Plant hormones and regulators,cytokinins...
of Corynebacterium fascians, in tissue culture
CAS REGISTRY NUMBERS:
2365-40-4 7724-76-7 28542-78-1 52020-11-8 of Corynebacterium fascians, in tissue culture
? ds

| Set | Items | Description |
|---|---|---|
| S1 | 5844 | ISOPENTENYL(W)ADENINE OR ISOPENTENYLADENINE OR ZEATIN |
| S2 | 102346 | TISSUE(W)CULTURE? |
| S3 | 1343 | S1 AND S2 |
| S4 | 10806 | CRYOPRESERVATION OR GERMPLASM (W) STORAGE |
| S5 | 7 | S3 AND S4 |
| S6 | 7 | RD (unique items) |
| S7 | 81381 | SHOOT? ? |
| S8 | 846 | S3 AND S7 |
| S9 | 3674079 | PY = 1998:2001 |
| S10 | 734 | S8 NOT S9 |
| S11 | 8461 | MICROPROPAGATION |
| S12 | 108 | S10 AND S11 |
| S13 | 97 | RD (unique items) |
| S14 | 126 | S2 AND S4 AND S7 |
| S15 | 108 | S14 NOT S9 |
| S16 | 95 | RD (unique items) |
| S17 | 25276 | CORYNEBACTERIUM OR RHODOCOCCUS |
| S18 | 69 | S2 AND S17 |
| S19 | 61 | S18 NOT S9 |
| S20 | 56 | RD (unique items) |

A DOCPHOENIX

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Specification Not in English

_____ TRNA ____
Transmittal New Application

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Count Non-Final

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## OUTGOING

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Signed 1449

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Examiner Answer

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Count Ex parte Quayle

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## INCOMING

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Extension of Time filed separate

## Internal

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Examiner Search Notes

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Fee Worksheet

## File Wrapper

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File Wrapper Claim

_____ IIFW ____
File Wrapper Issue Information

_____ SRFW ____
File Wrapper Search Info

REV 7/02/03